Field performance analysis of shoes used in the takraw games in Malaysia

ABSTRACT

Using proper footwear is crucial to avoid pain, deformations and injuries on foot. For athletes, a pair of good shoes is vital for comfort and may add to performance improvement. The main objective of this study is to study the performance of some commonly used shoes in the takraw games by using experimental tests and thermal measurements. The momentum and kinetic energies that were generated by the takraw shoes were also measured. The methods used in this study included free fall test, impact force analysis and surface thermal assessment. From the outcomes of the experiments, it was found that the prototype FA shoe was better in absorption of momentum and impact force than the other shoes and also with lower surface temperature after the trial game. These outcomes suggested that it was more suitable to be worn by the takraw players for better performance. All the information obtained from this study are particularly useful for improvement on the current design of takraw shoe.

Keyword: Shoe; Takraw games; Impact force; Momentum; Thermal measurements